Citizen Science Projects (MOOC) 1.11

Woods, Mel; Coulson, Saskia; Ajates, Raquel; Amditis, Angelos ; Cobley, Andy; Domian, Dahlia

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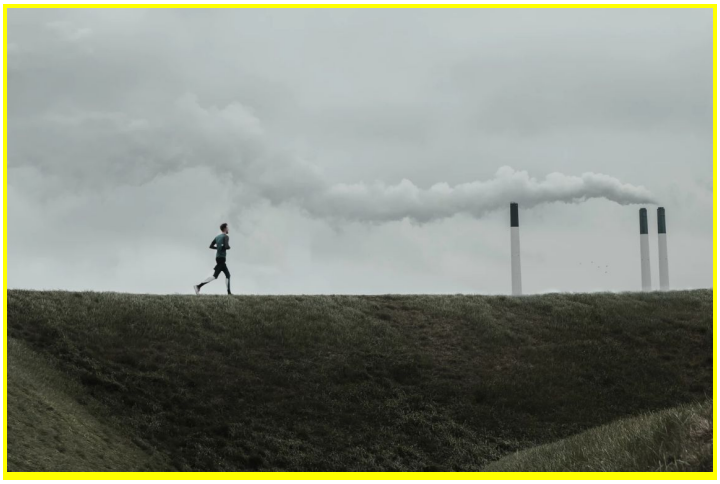
In the last step, we looked at the empathy timeline as a way to think about an environmental issue differently. Now, suppose that you have an environmental issue that directly concerns you or your community, and you want to do something about it. In this step, we will discuss how to delve into the issue and how to frame this into questions that can help to create a citizen science project.

First, think about the types of issues that can be addressed by a citizens observatory. These issues should be a worry to your community, of course, but you also need to be able to observe and measure them. You could use low-cost sensors, mobile phones, satellite imagery or visual observation, for example. Look for a way to understand the current status of a problem and to monitor how the issue changes over time.

Second, you need to know about the environmental policies, laws or regulations that apply to your issue. For example, can you show through your sensing activities that some health limits have been exceeded in your area? Only by providing evidence of the problem (e.g. air pollution), can you effect change, for example, by involving your local authorities or raising awareness in your local community to change behaviour.

Finally, you need an issue that sparks action and would encourage a community to act. Keep in mind that a community does not always mean acting only locally – a community can also be national or even global. Similar environmental issues affect many people around the world.



Let’s take air pollution as an example.

###Is it an issue where you are?
First, this would need to be an issue in your area. Maybe you experience health issues yourself or have been talking to neighbours who take their children to school along congested streets.

###Why does the problem exist?
Then, you need to understand what the potential sources of pollution could be and what these pollutants are. For example, is it NO2 from cars or particulate matter from nearby industry?

###How can it be measured?
Then, you need to measure the levels of pollution using sensors. In the case of air quality, there is a wide range of possible measurement tools that range from cheap and low-tech, to more expensive and higher-tech. You will want to consider budget, ease of use and accuracy when selecting your sensors.

###What are the current policies?
At the same time, you need to look at the safe pollution limits set by countries, regions (such as the EU) and organizations like the World Health Organization.

###What’s the question?
Finally, you can ask the question: does the air pollution in my local area exceed safe limits? If so, you can explore what days, and times air quality is worse or better to identify any trends. Even if limits are observed, is there a critical mass of interest to improve the current levels of air quality?

In the next step, we will look at the questions being addressed by other citizen observatories and find out why they were chosen.